

**REMARKS**

The Office Action mailed on November 15, 2005, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1-27 were pending, with claims 11-25 being withdrawn from prosecution. By this paper, Applicants cancel claims 2, 5 and 8, and do not add any claims. Therefore, claims 1, 3-4, 6-7 and 9-27 are now pending.

Applicants have amended some of the claims as detailed above. Support for these amendments may be found, among other places, in the claims as originally filed, and in the specification as originally filed on pages 18-20.

Applicants respectfully submit that the present application is in condition for allowance for at least the reasons that follow.

**Acknowledgement of References Cited**

Applicants respectfully request that the references listed on the submitted with the Information Disclosure Statements filed by Applicants on August 04, 2005, be initialed by an examiner and a copy of the form showing the initialization be provided to Applicants' agent. Additional copies of the Forms PTO/SB/08 are enclosed for the PTO's convenience in Appendix A.

**Rejections Under 35 U.S.C. § 102**

Claims 1-3, 9, 10, 26 and 27 stand rejected under 35 U.S.C. §102(b) as being anticipated by Judge (United States Patent No. 4,682,444). In response, in order to advance prosecution, and without prejudice or disclaimer, Applicants have made the above amendments to independent claim 1 (from which claims 3, 9 and 10 depend), and independent claims 26 and 27, and cancelled claim 2.

Applicants respectfully submit that the rejection of these claims is now moot in view of the above amendments, which incorporate into the independent claims, the feature from claim 4 of an arrangement that “operatively holds the plurality of shoes on the rear side of the lapping film in different contact areas in a partially overlapping relationship at a central region of the target shaped periphery of the workpiece and in non-overlapping relationship in both terminal regions,” which the Office Action recognizes is not present in Judge.

**Claim Rejections Under 35 U.S.C. §103(a)**

In the Office Action, claims 4-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Judge in view of JP 10-217090.

Applicants respectfully submit that all pending claims are allowable for at least the following reasons.

Applicants rely on MPEP § 2143, which states that:

[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is respectfully submitted that at least the first criteria of MPEP § 2143 was not met in the Office Action with respect to any of the previously pending claims, and that at least the first and third criteria cannot be met with respect to any presently pending claim.

**The Cited References Do Not Suggest All Claim Recitations**

Even if the first requirement of MPEP § 2143 could be satisfied with the cited references (which it cannot, as explained below), the cited references still do not meet the

third requirement, which is that “the prior art reference (or references when combined) must teach or suggest all the claim limitations.”

As noted above, claim 1, as amended, now recites an arrangement that “operatively holds the plurality of shoes on the rear side of the lapping film in different contact areas in a partially overlapping relationship at a central region of the target shaped periphery of the workpiece and in non-overlapping relationship in both terminal regions of the target shaped periphery,” which the Office Action recognizes is not taught by Judge.

The Office Action asserts that JP '090 teaches this missing feature of Judge. Assuming *arguendo* this to be the case, claim 1 further recites, with respect to holding the shoes in the offset position, “that the plurality of shoes are held in opposing offset positions with *offset displacement of each of the plurality of shoes set to be less than an oscillation stroke* provided by the oscillating mechanism.” (Emphasis added.) As is further recited in claim 1, this feature allows “the central region of the target shaped periphery to be lapped at a greater rate than those at which the other regions of the target shaped periphery are lapped, resulting in the target shaped periphery having a surface profile formed in a mid-concave profile.” It is the ability to produce a surface having a mid-concave profile on a crank shaft that is an advantage over the prior art, as the mid-concave profile allows for oil to be retained therein, thus enhancing lubrication of the crankshaft during use.

Judge cannot teach this added feature regarding offset displacement being set less than an oscillation stroke, as it does not teach the prerequisite offset, as recognized in the Office Action. JP '090 likewise does not teach this feature. In JP '090, no teaching or suggestion of this feature is present, and, as will be detailed below, JP '090 in fact teaches away from this feature as it results in a mid-concave profile.

In sum, even if the first requirement of MPEP § 2143 could be satisfied, the third requirement of MPEP § 2143 is not satisfied in the Office Action with respect to claim 1, because the cited references do not teach each and every element of the present invention.

\* \* \* \* \*

Because the combination of Judge and JP '090 fails to teach or suggest each and every element of the invention of claim 1, the combination fails to render obvious any claim that ultimately depends from claim 1, and thus the dependencies of claim 1 are allowable.

Claim 26 is duplicative of claim 1, except that it embraces the use of means-plus-function claim language pursuant to 35 U.S.C. 112, 6<sup>th</sup> paragraph, and thus this claim is allowable for the pertinent reasons that make claim 1 allowable. Claim 27 is a method claim that is concomitant with the result of utilizing the apparatus of claim 1, and thus is also allowable for the pertinent reasons detailed above.

Lack of Suggestion or Motivation to Modify or Combine the References

MPEP § 2143.01 states that “the prior art *must* suggest the desirability of the invention.” (MPEP § 2143.01, subsection 1, emphasis added.) The Office Action asserts that it “would have been obvious . . . to modify the invention of Judge et al. with the offset arrangement as taught by JP '090 to prevent local excessive shaving.” Applicants disagree that such desirability is found in the teachings of Judge.

True, in Judge’s “problem to be solved” section of the abstract, Judge states that the problem to be solved is to “prevent local excessive shaving,” just as is quoted in the Office Action. However, Judge immediately provides, as a solution, the use of an asymmetrically arranged pair of lap shoes, with reference to Fig. 1. The abstract does not comment on whether an offset arrangement “prevents local excessive shaving.” Thus, the rationale proffered in the Office Action does not rise to the standard required by MPEP § 2143.01, and a *prima facie* case of obviousness has not been established.

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MPEP § 2144.05(III), entitled Rebuttal Of *Prima Facie* Case Of Obviousness, states that a “*prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention.” (MPEP § 2144.05(III), second paragraph, emphasis added, citations omitted.)

As noted above, neither cited reference teaches or suggest the claimed features as they relate to producing a mid-concave profile. In fact, JP '090 teaches away from this feature, because JP '090 teaches that it seeks to “improve *straightness* of a finishing surface.” (Problem to be solved section, emphasis added.) Thus, far from imparting a mid-concave profile onto the work piece, JP '090 seeks to eliminate such a profile. Furthermore, Judge teaches that its assembly results in a “barrel shaped” cam. Therefore, both references in fact teach away from the invention as claimed. Thus, to the extent that a *prima facie* case of obvious might have been established, such case is hereby rebutted.

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In summary, because of the lack of suggestion or motivation in the prior art to modify the reference, the first requirement of MPEP § 2143 was not met in the Office Action with respect to the claims as previously pending, and cannot now be met, as detailed above, and, hence, a *prima facie* case of obviousness has not been established.

#### **Request for Rejoinder of Withdrawn Claims**

Claims 11-25 stand withdrawn. Applicants note that these claims depend either directly or ultimately from claim 1. Applicants respectfully request that these claims be rejoined and allowed due to their dependency from claim 1, a claim that is allowable. Applicants respectfully submit that no significant burden is placed on the PTO by rejoining and examining these claims. Indeed, such action is concomitant with the indication that “upon allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim.”

#### **Conclusion**

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Examiner Shakeri is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date

my 25, 2006

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## APPENDIX A